



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Younan Xia

Yugang Sun

Application No.: 10/732,910

Filed: December 9, 2003

For: **METHODS OF NANOSTRUCTURE
FORMATION AND SHAPE SELECTION**

Group Art Unit: 3653

Confirmation No.: 6911

Attorney Docket No.: 53433/2:2

Date: June 17, 2004

INFORMATION DISCLOSURE STATEMENT

TO THE COMMISSIONER FOR PATENTS:

1. Pursuant to the duty of disclosure, applicant presents for the Examiner's consideration the documents listed on the accompanying Form PTO-1449.

- ☒ Copies of listed documents are enclosed. (37 CFR § 1.98(a)).
- ☐ Copies of listed U.S. patent documents are omitted because this application was filed after June 30, 2003 and is, thus, subject to image file wrapper processing. Copies of listed foreign patent documents and non-patent literature are enclosed.
- ☐ Copies of the documents listed on sheet(s) _____ of Form PTO-1449 (or equivalent) are omitted because (1) they are already of record in U.S. Patent Application No. _____, filed _____, on which this application relies for an earlier filing date under 35 U.S.C. § 120; and (2) any information disclosure statement filed in the prosecution of Application No. _____, complies with 37 CFR §§ 1.98(a) through (c). (37 C.F.R. § 1.98(d))

2. ☐ The Examiner's attention is directed to the enclosed copy of copending U.S. Patent Application No. _____, filed _____, for _____, which is cited in this application.

3. This information disclosure statement is being submitted (check box a., b., or c.):

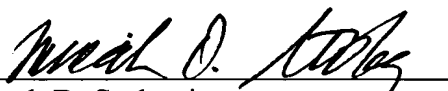

- a. ☒ Within three months of the filing date of a national application or entry of the national stage in an international application; or before the mailing of a first Office action on the merits; or before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. (No statement under 37 CFR 1.97(e) is required.); or

- b. ☐ After the period set forth in paragraph 3a, but before the mailing date of either a final action, a notice of allowance, or an action that otherwise closes prosecution in the application. (Check box i. or ii.)
- i. ☐ A \$180.00 information disclosure statement submission fee set forth in 37 CFR 1.17(p) is enclosed, or
- ii. ☐ A statement specified by 37 CFR 1.97(e) is set forth below; or
- c. ☐ After the mailing date of a final action or notice of allowance and on or before payment of the issue fee. A statement specified by 37 CFR 1.97(e) is set forth below. Enclosed is a \$180.00 information disclosure statement processing fee set forth in 37 CFR 1.17(p).
4. If a statement specified by 37 CFR 1.97(e) is required, the attorney or agent signing below hereby states that:
- ☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
- ☐ no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.
5. ☐ A concise explanation of the relevance of each document not in the English language and/or selected documents in the English language is set forth below.

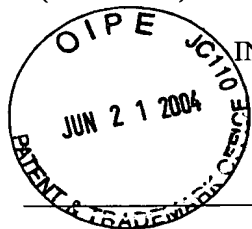
Respectfully submitted,

The University of Washington

By:


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FORM PTO-1449
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.:
53433/2:2APPLICATION NO.:
10/732,910INFORMATION DISCLOSURE CITATION
(Uses several sheets if necessary)

APPLICANTS: Younan Xia and Yugang Sun

FILING DATE:
December 9, 2003GROUP:
3653

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AD							
	AE							
	AF							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	AG	Yugang Sun and Younan Xia, "Shape-Controlled Synthesis of Gold and Silver Nanoparticles," <i>Science</i> , Vol. 298, December 13, 2002, pages 2176-2179.
	AH	Yugang Sun and Younan Xia, "Alloying and Dealloying Processes Involved in the Preparation of Metal Nanoshells Through a Galvanic Replacement Reaction," <i>Nano Letters</i> , Vol. 0, No. 0, September 11, 2003, Department of Chemistry, University of Washington, pages A-D.
	AI	Yugang Sun, Brian Mayers and Younan Xia, "Template-Engaged Replacement Reaction: A One-Step Approach to the Large-Scale Synthesis of Metal Nanostructures with Hollow Interiors," <i>Nano Letters</i> 2002, Vol. 2, No. 5, February 21, 2002, Department of Chemistry, University of Washington, pages 481-485.
	AJ	Yugang Sun and Younan Xia, "Increased Sensitivity of Surface Plasmon Resonance of Gold Nanoshells Compared to that of Gold Solid Colloids in Response to Environmental Changes," <i>Analytical Chemistry</i> , Vol. 74, No. 20, October 15, 2002, pages 5297-5305.
	AK	Yugang Sun, Brian Mayers and Younan Xia, "Metal Nanostructures with Hollow Interiors," <i>Advanced Materials</i> , 15, No. 7-8, April 17, 2003, pages 641-646.
	AL	Catherine J. Murphy, "Nanocubes and Nanoboxes," <i>Science</i> , Vol. 298, December 13, 2002, pages 2139-2141.
	AM	Yugang Sun and Younan Xia, "Multiple-Walled Nanotubes Made of Metals," Communication to <i>Advanced Materials</i> , July, 2003.
	AN	Yugang Sun and Younan Xia, "Large-Scale Synthesis of Uniform Silver Nanowires Through a Soft, Self-Seeding, Polyol Process," <i>Advanced Materials</i> , 14, No. 11, June 5, 2002, pages 833-837.
	AO	Yugang Sun and Younan Xia, "Insights into the Replacement Reaction Between Silver Nanostructures and Chloroauric Acid in Aqueous Medium," Article to <i>JACS</i> , October, 2003, 23 pages.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.